



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0590; Directorate Identifier 2011-NM-112-AD]

RIN 2120-AA64

Airworthiness Directives; Embraer S.A. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede an existing airworthiness directive (AD) that applies to all Model ERJ 190-100 STD, -100 LR, and -100 IGW airplanes; and Model ERJ 190-200 STD, -200 LR, and -200 IGW airplanes. The existing AD currently requires revising the maintenance program to incorporate modifications in the Airworthiness Limitation Section (ALS) of the Embraer S.A. ERJ 190 Maintenance Review Board Report (MRBR). Since we issued that AD, new inspection tasks and their respective thresholds and intervals have been issued. This proposed AD would require revising the maintenance program to incorporate modifications in the Airworthiness Limitation Section (ALS) of the Embraer S.A. ERJ 190 Maintenance Review Board Report (MRBR) to include new inspection tasks and their respective thresholds and intervals. We are proposing this AD since failure to inspect these structural components according to the new ALS tasks, thresholds, and intervals could prevent a timely detection of fatigue cracking, which if not properly addressed, could result in reduced structural integrity of the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Embraer S.A., Technical Publications Section (PC 060), Av. Brigadeiro Faria Lima, 2170 - Putim - 12227-901 São Jose dos Campos - SP – BRASIL; telephone +55 12 3927-5852 or +55 12 3309-0732; fax +55 12 3927-7546; e-mail distrib@embraer.com.br; Internet <http://www.flyembraer.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Cindy Ashforth, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-227-2768; fax: 425-227-1149.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2012-0590; Directorate Identifier 2011-NM-112-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

On May 13, 2010, we issued AD 2010-11-14, Amendment 39-16319 (75 FR 30277, June 1, 2010). That AD required actions intended to address an unsafe condition on the products listed above.

Since we issued AD 2010-11-14, Amendment 39-16319 (75 FR 30277, June 1, 2010), the Agência Nacional de Aviação Civil (ANAC), which is the airworthiness authority for Brazil, has issued Brazilian Airworthiness Directives 2010-08-03, dated September 20, 2010, and 2011-05-04, dated June 16, 2011 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

During the airplane full scale fatigue test, cracks were found in some structural components of the airplane. Analysis of these cracks resulted in modifications on the Airworthiness Limitation Section (ALS) of Embraer ERJ 190 Maintenance Review Board Report (MRBR), to include new inspections tasks and its respective thresholds and intervals.

Failure to inspect these structural components, according to the new tasks, thresholds and intervals, could prevent a timely detection of fatigue cracking. These cracks, if not properly addressed, could adversely affect the structural integrity of the airplane.

Since this condition may occur in other airplanes of the same type and affects flight safety, a corrective action is required. Thus, sufficient reason exists to request compliance with this [ANAC] AD in the indicated time limit.

The required action is revising the maintenance program to incorporate new structural inspection requirements. You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

Embraer S.A. has issued Part 2 – Airworthiness Limitation Inspections (ALI) – Structures, of Appendix A, Airworthiness Limitations (AL), of the EMBRAER 190 Maintenance Review Board Report, MRB-1928, Revision 5, dated November 11, 2010; and Temporary Revision (TR) 5-1, dated February 11, 2011, to Part 2 – Airworthiness Limitation Inspections (ALI) – Structures, of Appendix A, Airworthiness Limitations (AL), of the EMBRAER 190 Maintenance Review Board Report, MRB-1928, Revision 5, dated November 11, 2010. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA’s Determination and Requirements of This Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

**Correction to Restate Table 1 of AD 2010-11-14, Amendment 39-16319
(75 FR 30277, June 1, 2010)**

Table 1 of AD 2010-11-14, Amendment 39-16319 (75 FR 30277, June 1, 2010), contains a reference to EMBRAER Temporary Revision (TR) 2-6, dated December 12, 2008, to Part 2 – Airworthiness Limitation Inspections (ALI) – Structures, of Appendix A, Airworthiness Limitations (AL), of the EMBRAER 190 Maintenance Review Board Report, MRB-1928. We have determined that the correct date for that TR should be February 12, 2008. That information is reflected in table 1 of this proposed AD.

Costs of Compliance

Based on the service information, we estimate that this proposed AD would affect about 88 products of U.S. registry.

The actions that are required by AD 2010-11-14, Amendment 39-16319 (75 FR 30277, June 1, 2010), and retained in this proposed AD take about 1 work-hour per product, at an average labor rate of \$85 per work hour. Based on these figures, the estimated cost of the currently required actions is \$85 per product.

We estimate that it would take about 1 work-hour per product to comply with the new basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$7,480, or \$85 per product.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA

Administrator. “Subtitle VII: Aviation Programs,” describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2010-11-14, Amendment 39-16319 (75 FR 30277, June 1, 2010), and adding the following new AD: **Embraer S.A.:** Docket No. FAA-2012-0590; Directorate Identifier 2011-NM-112-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD supersedes AD 2010-11-14, Amendment 39-16319 (75 FR 30277, June 1, 2010).

(c) Applicability

(1) This AD applies to Embraer S.A. Model ERJ 190-100 STD, -100 LR, and -100 IGW airplanes; and Model ERJ 190-200 STD, -200 LR, and -200 IGW airplanes; certificated in any category; all serial numbers.

(2) This AD requires revisions to certain operator maintenance documents to include new actions (e.g., inspections). Compliance with these actions is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval of an alternative method of compliance (AMOC) according to paragraph (j)(1) of this AD. The request should include a description of changes to the required actions that will ensure the continued operational safety of the airplane.

(d) Subject

Air Transport Association (ATA) of America Code 52, Doors; 53, Fuselage; 54, Nacelles/Pylons; 55, Stabilizers; 57, Wings; 71, Powerplant; and 78, Engine Exhaust.

(e) Reason

This AD was prompted by reports of cracks in some of the structural components of the airplane. We are issuing this AD since failure to inspect these structural components according to the new ALS tasks, thresholds, and intervals could prevent a timely detection of fatigue cracking, which if not properly addressed, could result in reduced structural integrity of the airplane.

(f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

(g) Restated Actions and Compliance

This paragraph restates the actions required by paragraph (f) of AD 2010-11-14, Amendment 39 16319 (75 FR 30277, June 1, 2010).

(1) Within 90 days after July 6, 2010 (the effective date of AD 2010-11-14, Amendment 39-16319 (75 FR 30277, June 1, 2010)), revise the Airworthiness Limitation Section (ALS) of the Instructions for Continued Airworthiness (ICA) to include the tasks specified in table 1 of this AD. These tasks are identified in EMBRAER Temporary Revision (TR) 2-5, dated December 6, 2007; and EMBRAER TR 2-6, dated February 12, 2008; to Appendix A, Part 2, Airworthiness Limitation Inspections (ALI) – Structures, of the EMBRAER 190 Maintenance Review Board Report (MRBR), MRB-1928.

Note 1 to paragraph (g)(1) of this AD: The actions required by paragraph (g)(1) of this AD may be done by inserting a copy of EMBRAER TR 2-5 and TR 2-6 into the ALS of the EMBRAER 190 MRBR, MRB-1928. When these TRs have been included in general revisions of the EMBRAER 190 MRBR, MRB-1928, the general revisions may be inserted, provided the relevant information in the general revision is identical to that in EMBRAER TR 2-5 and TR 2-6, and these TRs may be removed.

(2) The initial compliance times for the tasks specified in EMBRAER TR 2-5, dated December 6, 2007; and EMBRAER TR 2-6, dated February 12, 2008; to

Appendix A, Part 2, Airworthiness Limitation Inspections (ALI) – Structures, of the EMBRAER 190 MRBR, MRB-1928; start at the later of the times specified in paragraphs (g)(2)(i) and (g)(2)(ii) of this AD. For certain tasks, the compliance times depend on the pre-modification and post-modification condition of the associated service bulletin, as specified in the “Applicability” column of these TRs.

(i) Within the applicable threshold times specified in the TRs specified in table 1 of this AD.

(ii) At the applicable compliance time specified in table 1 of this AD.

Table 1 – MRBR TRs and Tasks, with Compliance Times

EMBRAER MRBR TR	Subject	MRBR Task No.	Compliance Time
TR 2-5, dated December 6, 2007	Wing stub main box lower skin and splices—internal	57-01-002-0002	250 flight cycles after July 6, 2011 (the effective date of AD 2010-11-14, Amendment 39-16319 (75 FR 30277, June 1, 2010))
TR 2-5, dated December 6, 2007	Wing stub spar 3 –internal/external	57-01-008-0003	500 flight cycles after July 6, 2011.
TR 2-5, dated December 6, 2007	Wing stub spar 3 –external	57-01-008-0004	500 flight cycles after July 6, 2011.
TR 2-5, dated December 6, 2007	Wing lower skin panel stringers—internal	57-10-007-0004	500 flight cycles after July 6, 2011.
TR 2-5, dated December 6, 2007	Wing main box rib 11—internal	57-10-012-0003	500 flight cycles after July 6, 2011.

EMBRAER MRBR TR	Subject	MRBR Task No.	Compliance Time
TR 2-6, dated February 12, 2008	Nose landing gear wheel well metallic structure	53-10-021-0004	500 flight cycles after July 6, 2011.

(iii) Thereafter, except as provided in paragraphs (h) and (j) of this AD, no alternative replacement times or structural inspection intervals may be approved for the tasks specified in the TRs specified in table 1 of this AD.

(h) New Requirements of this AD: Revision of the Maintenance Program

Within 90 days after the effective date of this AD, revise the maintenance program to incorporate the tasks specified in Part 2 – Airworthiness Limitation Inspections (ALI) – Structures, of Appendix A, Airworthiness Limitations (AL), of the EMBRAER 190 Maintenance Review Board Report, MRB-1928, Revision 5, dated November 11, 2010; and EMBRAER TR 5-1, dated February 11, 2011, to Part 2 – Airworthiness Limitation Inspections (ALI) – Structures, of Appendix A, Airworthiness Limitations (AL), of the EMBRAER 190 Maintenance Review Board Report, MRB-1928, Revision 5, dated November 11, 2010; with the thresholds and intervals stated in these documents. The initial compliance times for the tasks are stated in the “Implementation Plan” section of Appendix A, Airworthiness Limitations (AL), of the EMBRAER 190 Maintenance Review Board Report, MRB-1928, Revision 5, dated November 11, 2010. Doing the revision required by this paragraph terminates the revision required by paragraph (g) of this AD.

(i) No Alternative Actions or Intervals

After accomplishing the revision required by paragraph (h) of this AD, no alternative actions (e.g., inspections) or intervals, may be used, unless the actions or intervals are approved as an AMOC in accordance with the procedures specified in paragraph (j)(1) of this AD.

(j) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Cindy Ashforth, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-227-2768; fax: 425-227-1149. Information may be e-mailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved.

Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(k) Related Information

Refer to MCAI Brazilian Airworthiness Directive 2011-05-04, dated June 16, 2011, and the service information specified in paragraphs (k)(1) through (k)(4) of this AD.

(1) EMBRAER TR 2-5, dated December 6, 2007, to Part 2 – Airworthiness Limitation Inspections (ALI) – Structures, of Appendix A, Airworthiness Limitations (AL), of the EMBRAER 190 Maintenance Review Board Report, MRB-1928.

(2) EMBRAER TR 2-6, dated February 12, 2008, to Part 2 – Airworthiness Limitation Inspections (ALI) – Structures, of Appendix A, Airworthiness Limitations (AL), of the EMBRAER 190 Maintenance Review Board Report, MRB-1928.

(3) EMBRAER TR 5-1, dated February 11, 2011, to Part 2 – Airworthiness Limitation Inspections (ALI) – Structures, of Appendix A, Airworthiness Limitations (AL), of the EMBRAER 190 Maintenance Review Board Report, MRB-1928, Revision 5, dated November 11, 2010.

(4) Part 2 – Airworthiness Limitation Inspections (ALI) – Structures, of Appendix A, Airworthiness Limitations (AL), of the EMBRAER 190 Maintenance Review Board Report, MRB-1928, Revision 5, dated November 11, 2010.

(5) For service information identified in this AD, contact Embraer S.A., Technical Publications Section (PC 060), Av. Brigadeiro Faria Lima, 2170 - Putim - 12227-901 São Jose dos Campos - SP – BRASIL; telephone +55 12 3927-5852 or +55 12 3309-0732; fax +55 12 3927-7546; e-mail distrib@embraer.com.br; Internet <http://www.flyembraer.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on May 24, 2012.

Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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